

# Jonathan A. Goldman

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## EDUCATION

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**Carnegie Mellon University**, Pittsburgh, PA

Sept. 2011-May 2015

- Bachelor of Science in Computer Science (with a minor in Discrete Mathematics), May 2015
- GPA: 3.94 (University Honors, SCS Honors, Phi Beta Kappa)

*Relevant Coursework:* Algorithm Design and Analysis, Tech Startup Lab, Machine Learning, Science of the Web, Undergraduate Complexity Theory, Parallel Computer Architecture and Programming, Foundations of Programming Languages

**Plainview-Old Bethpage John F. Kennedy High School**, Plainview, NY

Sept. 2007-June 2011

## WORK EXPERIENCE

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**Facebook**, New York, NY

August 2015-Present

*Software Engineer*

- Developer on Facebook's People Engineering team, which builds tools for finding, growing, and keeping employees (PHP, Javascript, React)

**Facebook**, Menlo Park, CA

Summer 2014

*Software Engineering Intern*

- Developer on team that uses crowdsourcing to improve accuracy and completeness of Facebook's entity graph (PHP, Python, Hive)
  - Built data pipelines and infrastructure powering the "recommended places" flow for the Facebook Graph Editor
  - Designed mechanisms and performed data analysis for leveraging the crowd to gather large volumes of labeled data
  - Created internal tool that uses labeled data to predict how a change to the crowdsourcing system will affect precision and recall

**Knewton**, New York, NY

Summer 2013

*Software Engineering Intern*

- Developed software for algorithmically generating questions, used for creating practice materials and delivering personalized assessment content (Java, Scala)
  - Capable of creating problems involving complex numbers, geometry, linear algebra, chemistry, and computer science
  - Wrote a domain-specific language that allows instructors to specify question and answer text, variable constraints and formulae, and multiple choice answers
- Wrote service interfaces (Thrift, REST), developed data models and queries (Titan), and researched server debugging tools (Takipi, Zipkin) for various projects with the full stack engineering team

**S&P Capital IQ**, New York, NY

Summer 2012

*Software Engineering Intern*

- Developed real-time financial notification system for Capital IQ's website enabling clients to subscribe to custom alerts (C#)
  - Notifications sent in real-time using both database push (via Redis Pub/Sub) and server push (via WebSockets); capable of sending tens of thousands of notifications per second across Capital IQ's multi-server environment
  - Designed frontend interface including Growl-style pop-ups and a Facebook-style notification panel (jQuery)
- Researched and benchmarked real-time and distributed caching technologies for the purpose of advising developers and business analysts on the design and administration of a web-based, real-time market data workstation

## RESEARCH AND ACADEMIC WORKS

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**Computational Social Choice Research**, *Supervised by Dr. Ariel Procaccia, Carnegie Mellon University*

Jan. 2013-May 2015

- Designed, analyzed, and implemented models and algorithms for fair division of indivisible goods, with a focus on efficient methods applicable to real world scenarios
  - Built *Spliddit*, a first-of-its-kind website which provides easy access to carefully designed fair division methods. *Spliddit* has received coverage in popular technology websites such as Gizmodo and Fast Company, and has been used by tens of thousands of people. (Ruby on Rails, AWS, CPLEX)
  - Coauthor of "The Computational Rise and Fall of Fairness" (AAAI 2014)

**Tech Startup Lab Project**, *Supervised by Dr. Luis Von Ahn, Carnegie Mellon University*

Sept. 2012-May 2013

- Submitted proposal and accepted to a competitive class focused around building a technology-based start-up company
- Worked with a team of four students to create *PubblePin*, a web application that offers an engaging interface for users to create and participate in comparison-based ranking polls (Ruby on Rails)

## HACKATHONS

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**TartanHacks 2014:** Winner, **HackCMU 2013:** "Coolest Hack" award